

PEARSON, J.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: EAST PALESTINE TRAIN
DERAILMENT

) CASE NO. 4:23CV0242
)
) JUDGE BENITA Y. PEARSON
)
) **ORDER**
) [Resolving [ECF No. 626](#)]

Pending is Third-Party Defendants GATX Corporation and General American Marks Company's (collectively "GATX") Motion to Exclude in Part the Expert Testimony of Allan Zarembski ([ECF No. 626](#)). Norfolk Southern Railway Corporation and Norfolk Southern Company (collectively "Norfolk Southern") filed an Opposition. ([ECF No. 683](#)). GATX replied. ([ECF No. 708](#)). The Court has been advised, having reviewed the record, the parties' briefs, and the applicable law. For the reasons below, the Court denies GATX's Motion to Exclude.

I. Background

A.

These facts are largely excerpted from the Notice of Stipulation Regarding Uncontested Facts ([ECF No. 586](#)) between Norfolk Southern and GATX.

"Norfolk Southern uses wayside detectors as one means to monitor railcar conditions along its tracks." [ECF No. 586 at PageID #: 17629, ¶20](#). "At the time of the derailment, Norfolk Southern's wayside detector system was intended to identify potential railcar defects before they escalated into accidents by detecting a range of issues, including hot wheels and overheated bearings." [ECF No. 586 at PageID #: 17629, ¶21](#). "Among the different kinds of wayside

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detectors Norfolk Southern used at the time of the derailment, its hot bearing detectors (“HBDs”) were its most abundant.” [ECF No. 586 at PageID #: 17629, ¶22](#). “At the time of the derailment, Norfolk Southern classified its responses to HBD readings above set thresholds into two categories: alarms and alerts.” [ECF No. 586 at PageID #: 17629, ¶23](#). Also, “the criteria for certain of Norfolk Southern’s HBD alerts included various thresholds of ‘K’ values, which are statistical measures of the deviation of a given bearing’s above-ambient temperature from those of the other bearings on either the same side of the train, called ‘Kt values,’ or the same car, called ‘Ke values.’” [ECF No. 586 at PageID #: 17629, ¶24](#). Norfolk had various temperature thresholds for its alarms, “Norfolk Southern’s HBD ‘warm bearing alarm’ was triggered when the bearing temperature was between 170°F and 200°F above ambient. . . . [the] ‘critical bearing alarm,’ was triggered when the temperature recorded by the HBD exceeded 200°F above ambient. . . . [and, the] ‘953 alert’ was generated when an HBD recorded a bearing temperature of 90°F above ambient or higher and a calculated Kt value greater than 4. . . .” [ECF No. 586 at PageID #: 17629-30, ¶¶ 25-27](#). “Norfolk Southern’s HBD ‘critical bearing alarm,’ required the train crew to immediately stop and inspect the train, consistent with safe train handling procedures.” [ECF No. 586 at PageID #: 17629-30, ¶ 28](#). “Norfolk Southern’s system was set such that new alerts were initially highlighted in red on a Wayside Help Desk analyst’s screen, but the highlighting disappeared after a few minutes if the alert was not addressed by the analyst[,]” and “if an analyst missed an alert, there was no reminder from the system to prompt the analyst to check the alert or follow up on the alert.” [ECF No. 586 at PageID #: 17630, ¶¶ 30-31](#). “On the night of February 3, 2023, before its derailment, Train 32N passed three HBDs, one each in Sebring, Salem, and East Palestine, Ohio, the first of which was about 30 miles before East Palestine.” [ECF No. 586 at PageID #: 17631, ¶ 40](#). “At around 8:13 PM, Train 32N

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reached Salem, Ohio (MP 69.01) and passed over an HBD that recorded GPLX 75465's L1 bearing at 103°F above ambient, an increase of 65°F above ambient in about ten miles.” [ECF No. 586 at PageID #: 17631, ¶ 46](#). “At Salem, Ohio, the L1 bearing was 83 degrees Fahrenheit hotter than its R1 counterpart, [b]y the time Train 32N reached Salem, Ohio, the Kt value of the L1 bearing was 5.8. The Salem HBD sent a 953 alert to the Wayside Desk indicating a bearing temperature spike.” [ECF No. 586 at PageID #: 17632, ¶¶ 47-49](#). “Gary Rambo was the only analyst on duty at the Wayside Desk when the 953 alert was sent, and he was working from his home.” [ECF No. 586 at PageID #: 17632, ¶ 50](#). “Train 32N passed MP 54.1 in New Waterford Ohio at 8:46 PM and third-party security camera footage showed GPLX 75465's L1 bearing glowing. Six minutes after passing the New Waterford MP, at approximately 8:52 PM on February 3, 2023, Train 32N passed over the HBD in East Palestine at MP 49.8. . . . At approximately 8:53 PM the HBD system sent the train crew a critical alarm for a hot bearing, alerting the crew to stop Train 32N.” [ECF No. 586 at PageID #: 17632, ¶¶ 51-52, 54](#). “Before the crew could bring the train to a controlled stop, Train 32N derailed.” [ECF No. 586 at PageID #: 17632, ¶ 55](#).

B.

Norfolk Southern filed a Third-Party Complaint seeking derivative damages under theories of negligence and joint and several liability against certain railcar owners: OxyVinyls LP, Gatx Corporation, General American Marks Company, and Trinity Industries Leasing Company.¹ *See* Third-Party Compl. ([ECF No. 119](#)). To bolster its third-party claims, Norfolk

¹ The Court dropped Trinity Industries Leasing Company as a Third-party Defendant with prejudice pursuant to [Fed. R. Civ. P. 21](#) for the reasons stated in the Unopposed Motion of Third-party Plaintiffs Norfolk Southern Corporation and Norfolk Southern Railway Company and Trinity ([ECF No. 460](#)). *See* Order ([ECF No. 464](#)).

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Southern proffers Allan Zarembski, a railroad engineering, and safety program expert, opining on the adequacy of Norfolk Southern's wayside detection and hot-bearing detector systems. *See* Rebuttal Expert Report of Dr. Allan M. Zarembski ([ECF No. 626-1](#)). GATX moves the Court to exclude certain of Dr. Zarembski's opinions, arguing that his methodologies are unreliable or not rooted in sufficient data or, that he is not qualified to offer them. *See* Third-Party Defs. GATX Co. and Gen. Am. Marks Co.'s Mot. to Exclude the Test. of Allan Zarembski ([ECF No. 626](#)).

II. Legal Standard

[Rule 702 of the Federal Rules of Evidence](#) provides the standards for admitting expert testimony:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

[Id.](#)

[Rule 702](#) "assign[s] to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." [Daubert v. Merrell Dow Pharm., Inc.](#), 509 U.S. 579, 597 (1993). It also governs the admissibility of expert testimony and codifies the Supreme Court's holdings in [Daubert](#) and [Kumho Tire Co. v. Carmichael](#), 526 U.S. 137 (1999). Expert testimony is admissible only if (1) the testimony is based on sufficient facts or data, (2) the testimony comes from reliable principles and methods, and (3) the expert has reliably applied the principles and methods to the facts of the case. [Fed. R. Evid. 702](#). An

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expert's opinion cannot be based on mere speculation. *McLean v. 988011 Ontario, Ltd.*, 224 F.3d 797, 801 (6th Cir. 2000). The proponent of the expert testimony has the burden of establishing by a preponderance of the evidence that the proposed testimony satisfies those standards. See Fed. R. Evid. 702 advisory committee's note (2000); *Daubert*, 509 U.S. at 592 n.10. Expert testimony is not admissible “is the exception rather than the rule.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 530 (6th Cir. 2008) (quoting Fed. R. Evid. 702 advisory committee's note (2000)). When evaluating a scientific or experiential expert, a court “must examine the expert witness's testimony for reliability and relevance.” *United States v. Martinez*, 588 F.3d 301, 323 (6th Cir. 2009).

Furthermore, a *Daubert* analysis includes consideration of Fed. R. Evid. 403. *Daubert*, 509 U.S. at 595. Therefore, courts in the Sixth Circuit employ a four-prong test to determine the admissibility of expert opinions: “(1) that the witness, a qualified expert, (2) was testifying to a proper subject, (3) which conformed to a generally accepted explanatory theory, and (4) the probative value of the testimony outweighed its prejudicial effect.” *United States v. Smithers*, 212 F.3d 306, 312 (6th Cir. 2000) (citing *United States v. Green*, 548 F.2d 1261 (6th Cir.1977)).

III. Analysis

Allan Zarembski is a Professor of Practice and Director of Railroad Engineering and Safety Program, experienced in rail operations, including freight and passenger operations, transit, commuter and inter-urban. See Appendix A (ECF No. 626-1) at PageID #: 35825. He offers consulting services for major rail operations worldwide, and develops and teaches professional courses in railroad engineering and safety. *Id.*

Dr. Zarembski makes three opinions in rebuttal to the expert reports of James Rader, Joseph Lemberg, and Chason Coelho. ECF No. 626-1 at PageID #: 35792. First, he testifies that

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Norfolk Southern’s “wayside detection system, and in particular its use of HBDs, was consistent with, and by some measures better than, industry standards and guidelines among Class 1 railroads in the United States and was effective at identifying bearing-related issues and preventing derailments.” [ECF No. 626-1 at PageID #: 35792](#). Second, he testifies that Norfolk Southern responded appropriately to the readings generated by the HBDS that Train 32N passed leading to the derailment. *Id.* Third, he testifies that “the HBDS were calibrated properly and in good working order.” *Id.*

1. Dr. Zarembski is Qualified to Opine on The Appropriateness of Norfolk Southern’s Hot-Bearing Detection System

GATX argues that Dr. Zarembski is not qualified to opine on the adequacy of Norfolk Southern’s HBDs, because he has not calibrated, designed, manufactured, installed, or maintained a hot-bearing detector system, nor written regulations, guidance, or industry standards relating to hot-bearing-detector systems. [ECF No. 626 at PageID #: 35785](#). In short, it suggests that “[h]is general experience as an engineer and work with other railroad technologies does not qualify him to opine on HBDs[.]” [ECF No. 626 at PageID #: 35786](#); *see also* Third-Party Defs. GATX Co. and Gen. Am. Marks Co.’s Reply in Supp. Of Mot. To Exclude in Part the Expert Test. of Allan Zarembski ([ECF No. 708](#)) [at PageID #: 51454](#) (claiming “GATX did not argue that Zarembski is unqualified to opine about issues relating to his area of expertise. GATX argues instead that Zarembski improperly attempts to exceed his expertise by opining specifically about HBDs and the Wayside Desk.”)

Norfolk Southern responds that neither Rule 702 nor *Daubert* require that Dr. Zarembski have “practical experience” calibrating or installing HBDS, or specific experience with writing regulations, guidance, or industry standards to qualify as an expert. *See* Norfolk S. Co. and Norfolk S. Ry. Co.’s Opp’n. to GATX’s Partial Mot. To Exclude Expert Ops. And Test. of Dr.

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Allan Zarembski ([ECF No. 683](#)) [at PageID #: 48392](#). Instead, Norfolk Southern counters that his decades of experience in rail operations and safety, and teaching experience on wayside detection systems, make him qualified. [ECF No. 683 at PageID #: 48394](#).

Neither Rule 702 nor *Daubert* require that Dr. Zarembski have the specificity of experience for qualification that GATX urges. Instead, Rule 702 requires that the court “must determine whether the expert’s training and qualifications relate to the subject matter of his proposed testimony.” [Smelser v. Norfolk S. Ry. Co., 105 F.3d 299, 303 \(6th Cir. 1997\)](#). “[Courts] take a liberal view of what ‘knowledge, skill, experience, training, or education’ is sufficient[.]” [Bradley v. Ameristep, Inc., 800 F.3d 205, 209 \(6th Cir. 2015\)](#). In making that determination, the question is whether a particular expert can help resolve the issue in each case. [Bridger v. Union Ry. Co., 355 F.2d 382, 388 \(6th Cir. 1966\)](#) (finding an expert’s opinion “requires an *ad hoc* determination, predicated upon the probable value of the witness’s testimony in relation to the intricacies of the particular lawsuit.”). “[T]he expert need not have complete knowledge about the field in question and need not be certain. He need only be able to aid the jury in resolving a relevant issue.” [Mannino v. Int’l Mfg. Co., 650 F.2d 846, 850 \(6th Cir.1981\)](#).

Dr. Zarembski has decades of experience in rail operations and safety ([ECF No. 626-1 at PageID #: 35825-27](#)), he teaches railroad engineering and safety courses ([ECF No. 626-1 at PageID #: 35825](#)), he has researched railroad track engineering, vehicle-track dynamics, and wheel-rail interaction, and published technical papers on railway engineering ([ECF No. 626-1 at PageID #: 35828-29](#)). He also teaches a university course on Railroad Safety and Engineering discussing HBDs, which includes overheated journal bearings, *see* [ECF No. 626-1 at PageID #: 35793](#). His experience and knowledge of railway emergency responses, track engineering, wheel-rail interaction, and HBDs allow him to opine on the adequacy wayside detection systems,

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detection thresholds for railroad inspection technologies, and HBDs. See [*Palatka v. Savage Arms, Inc.*, 535 F. App'x 448, 455 \(6th Cir. 2013\)](#) (finding mechanical engineering professor qualified to opine on various mechanical topics, such as a firearm, despite not being a firearm expert); see also [*Surles ex rel. Johnson v. Greyhound Lines, Inc.*, 474 F.3d 288, 294 \(6th Cir. 2007\)](#) (affirming district court's finding that a threat assessment expert in the transportation industry was qualified to opine on threat assessment in the bus industry, because "[i]t is of little consequence to questions of admissibility that [the expert] lacked expertise in the very specialized area of commercial bus line threat assessment).

Because Dr. Zarembski's expert testimony and report are based on his railroad safety and wayside detection experience, and his opinions will assist the trier of fact in understanding Norfolk Southern's wayside detection system, the Court finds that Dr. Zarembski is qualified to opine on Norfolk Southern's wayside detection system and HBDs.

IV. Dr. Zarembski's Opinions are Reliable

GATX argues that the Court should exclude Dr. Zarembski's opinions that Norfolk Southern's use and monitoring of the HBDs was appropriate and consistent with industry standards ([ECF No. 626 at PageID #: 35778](#)), and the design of Norfolk Southern's Wayside Desk ([ECF No. 626 at PageID #: 35783](#)), because they are not grounded in sufficient data and utilize an unreliable methodology. [ECF No. 626 at PageID #: 35778](#); see also [ECF No. 708 at PageID #: 51444-45](#) ("No amount of credentialing or experience gets around the fact that Zarembski does not make the appropriate connection between his experience and his purported opinions regarding the (i) propriety of the trending alert criteria, (ii) propriety of the wayside detection system, or (ii) design of the Wayside Desk.") GATX also argues that the opinion discussing the use of monitoring the HBDS uses the trending alert criteria, lacks support from

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scientific data or facts in the record ([ECF No. 626 at PageID #: 35779-80](#)), and glosses over any reliable analysis of temperature thresholds and Norfolk Southern's spacing of the HBDS, *see* [ECF No. 626 at PageID #: 35781-82](#). GATX claims that Dr. Zarembski's opinion on the use of Norfolk Southern's Wayside Desk cites no data supporting his conclusion for the typical response time for the wayside detector alerts ([ECF No. 626 at PageID #: 35783](#)), and fails to answer critical questions about the design of the Wayside Desk, *see* [ECF No. 626 at PageID #: 35784](#).

Norfolk Southern counters that Dr. Zarembski's opinions are reliable because he depends on his decades of experience working in and teaching railroad safety and wayside detection issues. [ECF No. 683 at PageID #: 48397](#). It responds that GATX misapplies Rule 702's reliability requirements by asserting that Dr. Zarembski must have published studies, analyses, or publications. His non-scientific expert testimony is reliable, Norfolk Southern claims, because it is supported by his professional experience analyzing railroad inspection technologies, including "detection thresholds on the rate of false alarms and the risks associated with those false alarms" [ECF No. 683 at PageID #: 48398](#) (citing Allan Zarembski, Ph.D. Dep. Tr. ([ECF No. 626-10](#)) at [PageID #: 36500-01](#)). Furthermore, Norfolk Southern responds that Dr. Zarembski's opinion on the HBD alert thresholds and detector spacing is reliable, because his opinion not offered to provide a technical or statistical analysis about the "efficacy of any specific threshold, spacing or set of criteria", instead his "testimony is offered to place Norfolk Southern's use and monitoring of HBDs in context both in terms of how it comports with industry standards and guidance and its effectiveness in identifying potentially defective bearings." [ECF No. 683 at PageID #: 48400](#). Lastly, Norfolk Southern contends that Dr. Zarembski's methodology concerning the Wayside Desk is reliable, because it relies on

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sufficient facts, and helps the jury understand how Norfolk Southern’s HBD alert system functions. [ECF No. 683 at PageID #: 48403-04](#).

“The task for the district court in deciding whether an expert's opinion is reliable is not to determine whether it is correct, but rather to determine whether it rests upon a reliable foundation, as opposed to, say, unsupported speculation.” [In re Scrap, 527 F.3d at 529–30](#). “[W]here non-scientific expert testimony is involved, ‘the *Daubert* factors may be pertinent,’ or ‘the relevant reliability concerns may focus upon personal knowledge or experience.’” [Surles ex rel. Johnson v. Greyhound Lines, Inc., 474 F.3d 288, 295 \(6th Cir. 2007\)](#) (alteration in original) (quoting [First Tennessee Bank Nat. Ass’n v. Barreto, 268 F.3d 319, 335 \(6th Cir. 2001\)](#)). In [United States v. Lang, 717 Fed.Appx. 523 \(6th Cir. 2017\)](#), the Sixth Circuit held that an expert opinion is reliable when it rests on a “*sufficient*” factual basis and is not “plainly contradict[ed]” by the record. [Id. at 536](#) (emphasis in original). “[T]he reliability inquiry is a flexible one and may ‘focus upon personal knowledge and experience[.]’” [Johnson v. Manitowoc Boom Trucks, Inc., 484 F.3d 426, 432 \(6th Cir. 2007\)](#) (quoting [Kumho, 526 U.S. at 150](#)). “[A]s long as there is a reasonable factual basis for the expert’s opinion, any objections to their testimony go to its weight and not its admissibility.” [Babcock Power, Inc. v. Kapsalis, 854 F. App’x 1, 8 \(6th Cir. 2021\)](#) (citation omitted).

The Court finds that Dr. Zarembski’s testimony on the wayside help desk and HBDS constitutes “technical or other specialized knowledge[,]” and that the *Daubert* factors alone cannot measure the reliability of his testimony. See [Fed. R. Evid. 702](#); see also [Barreto, 268 F.3d at 335](#) (upholding district court’s admittance of non-expert testimony that “derived largely from [the expert’s] own practical experience throughout forty years in the banking industry[,]”

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because “[o]pinions formed in such a manner do not easily lend themselves to scholarly review or to traditional scientific evaluation.”).

As earlier indicated, Dr. Zarembski has over 45 years of experience in professional engineering responsibility ([ECF No. 621-6 at PageID #: 35825](#)), he teaches a course on Railroad Safety and Engineering that discusses HBDs, acoustic bearing detectors, how detectors function, and bearing and axel failures that include overheated journal bearings, *see* [ECF No. 626-1 at PageID #: 35793](#). He has conducted wayside detection system studies on Wheel Impact Load Detectors (“WILDS”) for both Federal Railway Administration and railroads. *Id.* In rendering his opinions, he relies on many sources, including materials from the Association of American Railroads (“AAR”) ([ECF No. 626-1 at PageID #: 35848](#)), the FRA Wayside Detection Guide ([ECF No. 621-1 at PageID #: 35848](#)), the Department of Transportation Federal Railroad Administration ([ECF No. 626-1 at PageID #: 35851](#)) and several items from the record such as Norfolk Southern’s Operating Rules ([ECF No. 621-1 at PageID #: 35849](#)), and, the data available regarding Norfolk Southern’s 953 alert, *see* [ECF No 621-6 at PageID #: 35812-13](#).

GATX can oppose Dr. Zarembski’s opinions on “the (i) propriety of the trending alert criteria, (ii) propriety of the wayside detection system, or (ii) [*sic*] design of the Wayside Desk[,]” on cross-examination. *See* [Daubert, 509 U.S. at 596](#) (finding “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”)

The Court denies GATX’s motion to exclude Dr. Zarembski opinions for lack of reliability.

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CONCLUSION

Accordingly, the Court denies Third-Party Defendants GATX Corporation and General American Marks Company's Motion to Exclude in Part the Expert Testimony of Allan Zarembski ([ECF No. 626](#)).

IT IS SO ORDERED.

February 3, 2025

Date

/s/ Benita Y. Pearson

Benita Y. Pearson
United States District Judge